



California Bus Association

Promoting Professionalism, Safety & Integrity in the Motorcoach Industry

William Allen
14-3-2
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Tom Giddens, President

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Via electronic mail: mnichols@arb.ca.gov

Mary Nichols, Chairman
California Air Resources Board
1001 "I" Street
POB 2815
Sacramento, Calif. 95812

Response to Staff Report: Proposed Amendments to the Truck and Bus Regulation

Dear Ms. Nichols:

Background

The California Bus Association, CBA, represents 64 bus fleet owners operating approximately 2,586 40-plus passenger heavy duty motor coaches over 26,000 pounds. Our members' fleets are largely domiciled in California and operate primarily but not exclusively tour and charter for-hire service to third party international, national and local passenger groups, to for-profit and non-profit enterprises and local government institutions ranging from school districts to county and special district governing bodies.

Since before this regulation was adopted and implemented, our members and representatives have had a close working relationship with staff to provide staff with forums to explain the development of the rule, its provisions and its implementation.

Bus industry within the truck & bus regulation

CBA has reviewed the **March 2014 Staff Report and Proposed Amendments** (hereinafter, the Report). CBA believes the Report offers the motor coach industry the opportunity of a formalized setting to assess past and possible future impacts on our industry and we are hereby respectfully proposing further refinements pursuant to this regulatory amendment process that ultimately will further reduce emissions from our buses on the one hand yet reflect the unique characteristics of our industry not analyzed, studied or taken into consideration to date as reflected in the Report's section **X. Other Stakeholder Concerns and Update.**

Our industry's turnover from older to newer and new coaches is a testament to our contribution to the goals of the rule. The May 1 Bus & Motorcoach News article on new motorcoach national sales reports a 7% increase in new motorcoaches in 2013 – 20% higher than 2011. A survey of the largest California distributor of new motorcoaches confirms this figure within the context of a largely static bus fleet population.

If put into perspective, how does the motor coach industry stand in reference to the overall diesel vehicle population governed by this rule.

The Report provides an important foundation (**I.C. Background**) for the Truck and Bus regulation. As to the breath and scope of this regulation the report states, as follows: *"The regulation applies to nearly one million diesel vehicles with a manufacturer's gross vehicle weight rating (GVWR) greater than 14,000 pounds that annually operate in California.* In perspective, the total private bus industry in California is but an insignificant fraction of the Rule inventory, to wit:

Based on joint efforts by CARB staff and CBA in 2008 to estimate the past and future motor coach population, it was estimated that there would be approximately **5,679** motor coaches exceeding 33,000 pounds by 2014, assuming an annual increase of 1.75% from 2000 forward to 2025. Current data from the California Public Utilities Commission (CPUC) shows that the total number of 40+ seating coaches tops out at **5,279 – 400** less buses. This 5,279 figure includes private school bus carriers providing charter bus service. Therefore, the 2014 bus estimated target is overstated.

However, this 2014 target number represents **.0056%** of the total diesel population covered under the Rule. Even if we instantly added 1,194 more motor coaches, equaling the 2025 target, the population would still represent **.0068%** of the Rule inventory 2014 Report.

Distinctive bus characteristics not addressed

Staff does recognize one differentiation between bus and most truck fleets and that is: one private bus does not equal one truck in annual mileage comparisons. According to a US Department of Energy study, June 2009, heavy duty trucks travel an average of *"150,000 to 200,000 miles per year"* while motor coach Vehicle Miles Traveled (VMTs) generally average about one-quarter as many VMTs or less depending on the market segment served by individual bus companies – shuttles, local charters, intra and or intrastate customers.

However, CARB gross emission rates for motor buses based on generally accepted annual VMTs do not take into consideration automobile VMTs removed and the resulting emission savings in the Rule inventory from reliance on the most fuel efficient mode of passenger travel— motor coaches. An American Bus Association study estimates that a loaded motor coach provides 184 passenger miles per gallon (MPG) which is double the second most fuel-efficient sector, commuter rail, at 86 passenger MPG. Therefore, increased motorcoach use does have a net effect in reducing PM2.5 emissions and especially NOx emissions from “Cars and other On-Road” vehicles as shown in **Figure IV-1** and **Figure IV-2** of **IV. AIR QUALITY, E. 2. In the Report**.

More importantly, a significant deficiency in the Report, from the private bus standpoint, is that the Report’s **Other Stakeholder Concerns and Update** does not specifically address or single out for further data analysis our industry’s unique conditions, especially safety concerns, as it relates to DPF retrofits.

The end result is that many bus companies are placed in a regulatory purgatory consumed in endless paperwork for no practical or public purpose.

DPF retrofits on motorcoaches

Over the past several years our experience with motorcoaches retrofitted with DPFs have led CBA to the inescapable conclusion that there must be a heightened awareness of the safety consequences of retrofitting older motorcoaches with DPF devices never intended by the bus or engine manufacturers to be attached inside a motorcoach. Why have we come to this conclusion?

From an overall operating and basic vehicle configuration perspective there are significant differences between most heavy duty trucks and private motorcoaches when non-OEM Diesel Particulate Filters are attached or fastened on to the emission tailpipe of a bus. For the sake of convenience and better understanding of the safety concerns, the following factors mostly unique to our industry are listed herewith:

- The engine duty cycle: From day-to-day, buses operate different types of service from a local shuttle or city trip to an over-the-road charter on flat or mountainous terrain. In other words, the duty cycle changes on a daily basis.

- The overall components inside a bus: Unlike the typical truck, motorcoaches require luggage space and generally do not have excess space to add a typical PM filter of 14-15 inches in diameter and 48 inches (4 feet) long.
- Bus configuration: In some cases a DPF filter cannot be attached unless the structure of the bus is altered because of the physical location of the filter. For example, the Prevost 2003 and newer bus simply cannot be retrofitted per the manufacturer and aftermarket installers. Older non EGR Prevosts must remove the auxiliary diesel-fired heater to make the device fit.
- Engines: Exhaust Gas Recycle (EGR) equipped engines present the most problems. The DPF generally clogs up faster on an EGR engine which is designed to recycle dirtier air and a cold duty cycle of a bus (vs. more optimal combustion rate) exacerbates the problem of clogged filters and hot turbochargers.
- Engine RPMs: Another substantial factor for DPF failures is the bus automated transmissions with 6 forward speeds vs. a truck with 13 to 18 forward speeds. Less forward speeds prevents optimal bus engine RPMs causing DPF clogging and eventual engine malfunctions and worse.

Based on a recent CBA survey, several of our members responded by raising the points listed above. In summary, because DPF retrofits are not OEM approved significant operational issues arise such as no engine shut down features as the filter cannot "talk" to the engine ECM. The big danger is the potential for fire caused by a failed turbo plugging the DPF.

City trips – a cold duty cycle – will eventually result in filters clogging. In other instances buses cannot pass the installer's heat profile test. One provider alone has 26 devices that have failed despite a major expenditure of resources to remedy the breakdowns.

All of these instances described above (approximately 50 in all in our snap survey), has led to regulatory paralysis and bus operators are left with mountains of paperwork in order to comply with the Rule. Nowhere in the Report and Proposed Amendments is this widespread situation explained or addressed.

Therefore, CBA is requesting regulatory relief for good faith efforts and adherence to best practices in maintaining our diesel motorcoach fleets. CBA is hereby presenting CBA's suggested revisions to staff's Proposed Amendments.

These proposed amendments reflect the market conditions we operate in, reward long range planning before the Rule was implemented, while at the same time are consistent with staff's intent to expand compliance without unduly discounting the investments already made by our industry:

- Faulty devices on motorcoaches: If a bus cannot pass a heat profile test or a PM filter has been installed and subsequently recalled or cannot be repaired or function properly under generally accepted maintenance practices on an engine in a good state of repair, the vehicle should be allowed to operate until January 1, 2021 without incurring any more expense or paperwork pursuant to its documented report to CARB.
- Early compliance credits for motorcoaches: Use of existing credits for downsizing, early addition of filters and cleaner vehicles should be extended to January 1, 2020.
- Non-compliant motorcoach fleets: Non-compliant motorcoach fleets undercut the charter market and should be brought into compliance on an individual basis no matter the size of the fleet. Therefore, if a non-compliant fleet owner self-discloses to CARB enforcement, prior to being cited by CARB, then CARB should develop an individualized plan to accelerate compliance including credit for reduction of fleet since 2006, if applicable.

Sincerely,



Tom Giddens, President
California Bus Association

Cc: Todd Sax
Tony Brasil